

ABSTRACT OF THE DISCLOSURE

Disclosed are the *cna* gene and *cna*-derived nucleic acid segments from *Staphylococcus aureus*, and DNA segments encoding *cna* from related bacteria. Also disclosed are Col binding protein (CBP) compositions and methods of use. The CBP protein and antigenic epitopes derived therefrom are contemplated for use in the treatment of pathological infections, and in particular, for use in the prevention of bacterial adhesion to Col. DNA segments encoding these proteins and anti-(Col binding protein) antibodies will also be of use in various screening, diagnostic and therapeutic applications including active and passive immunization and methods for the prevention of bacterial colonization in an animal such as a human. These DNA segments and the peptides derived therefrom are contemplated for use in the preparation of vaccines and, also, for use as carrier proteins in vaccine formulations, and in the formulation of compositions for use in the prevention of *S. aureus* infection.